

FUNGAL FEEDING BY YELLOW-TAILED BLACK-COCKATOO

Larvae of wood-boring insects and seeds of trees and shrubs are believed to compose the major part of the diet of the Yellow-tailed Black-Cockatoo *Calyptorhynchus funereus* (McInnes and Carne 1978 and references therein).

In March 1989, two Yellow-tailed Black-Cockatoos were observed in Blackwood *Acacia melanoxylon* swamp near Togari in north-west Tasmania (grid reference 3205 54689). One bird perched on a thin vertical stem and called as the other fed. The feeding bird clung to a broken dead *Leptospermum* trunk 5 m in height and approximately 20 cm diameter at breast height. It fed by ripping small pieces (4×2 cm) of bark from the trunk with its beak. The pieces of bark were turned over and the inner surface of the bark was scraped by the lower beak. Examination of pieces of bark dropped at the base of the trunk revealed a layer of white material about 0.5 mm thick covering the inner surface. Strips of this white material had been removed where the birds bill had scraped the surface. Around 20 per cent of the material had been removed by this scraping. Microscopic examination of the white material (by Alan Mills, University of Tasmania) showed it to be composed of hyphomycetes fungi and slime mould growing in the cambium of the bark.

Peter Brown (cited in Blakers *et al.* 1984) has observed Yellow-tailed Black-Cockatoos in Tasmania cutting open and eating heartwood of regenerating eucalypts. This behaviour may also be associated with fungal feeding. Martin (1979) has concluded that the composition of fungal tissue makes it a desirable resource either as a dietary staple or as a minor dietary component which provides some particular nutrient missing from the rest of the diet.

REFERENCES

- Blakers, M., Davies, S. J. J. F. and Reilly, P. N. (1984). 'The Atlas of Australian Birds', (Melbourne University Press: Carlton.)
- McInnes, R. S. and Carne, P. B. (1978). Predation of cossid moth larvae by Yellow-tailed Black-Cockatoos causing losses in plantations of *Eucalyptus grandis* in north coastal New South Wales. *Aust. Wildl. Res.* 5: 101-121.
- Martin, M. M. (1979). Biochemical implications of insect mycophagy. *Biol. Rev.* 54: 1-21.

ROBERT J. TAYLOR

Tasmanian Forestry Commission,
30 Patrick Street, Hobart, Tas. 7000

NICK J. MOONEY

Wildlife Division, Department of Lands, Parks and Wildlife,
G.P.O. Box 44A, Hobart, Tas. 7001

Received 6 April, 1989

BOOK REVIEW

Ecology of Birds — an Australian Perspective. Hugh A. Ford, 1989. Surrey Beatty & Sons Pty Limited, Chipping Norton. \$36.90.

I was recently told the circumstances surrounding Doug Dow's first encounter with co-operative breeding when he came to Australia to carry out a study of Australian birds. Having arrived in Australia, Doug (one time RAOU President) began searching for a suitable subject to study. Noisy Miners were common around the campus of the University of Queensland where Doug was stationed and he began observing nests. As he watched young being fed in the nest he noticed that an adult carrying food was in moult. This was surprising since experience from the northern hemisphere told him that birds usually never breed and moult at the same time, as this was not energetically efficient. However, not only was there one adult in moult feeding young at this nest, but there were several different adults in different moult states. Doug had discovered that Noisy Miners were co-operative breeders and that the moulting birds were in fact helpers at the nest.